Claims

- [c1] 1.An antistatic composition comprising:
 - a polycarbonate resin;
 - an impact modifier comprising a polysiloxane;
 - an antistatic agent; and
 - a flame retardant in an amount greater than or equal to about 9 wt% of the total composition.
- [c2] 2.The composition of Claim 1, wherein the polycarbonate resin comprises about 10 to about 90 wt% of the total composition.
- [c3] 3.The composition of Claim 1, wherein the antistatic agent comprises a polyetheresteramide, a polyetherester, a polyetheramide, or a combination comprising at least one of the foregoing antistatic agents.
- [c4] 4.The composition of Claim 1, wherein the antistatic agent comprises about 0.01 to about 25 wt% of the total composition.
- [c5] 5.The composition of Claim 1, wherein the impact modifier comprises about 1 to about 20 wt% of the total composition, and wherein the impact modifier is a polycarbonate-polysiloxane, a polymethylmethacrylate-polyacrylic-polysiloxane copolymer, or a combination comprising at least one of the foregoing impact modifiers.
- [c6] 6.The composition of Claim 1, wherein the impact modifier comprises about 2 to about 12 wt% of the total composition.
- [c7] 7.The composition of Claim 1, wherein the flame retardant is an aromatic phosphate compound of the formula (V):

wherein each R may be the same or different and is alkyl, cycloalkyl, aryl, alkyl substituted aryl, halogen substituted aryl, aryl substituted alkyl, halogen, or a combination comprising at least one of the foregoing substituents.

[c8] 8.The composition of Claim 1, wherein the flame retardant is an aromatic

phosphate, and phenyl bis(dodecyl) phosphate, phenyl bis(neopentyl) phosphate, phenyl bis(3,5,5-trimethylhexyl) phosphate, ethyl diphenyl phosphate, 2-ethylhexyl di(p-tolyl) phosphate, bis(2-ethylhexyl) p-tolyl phosphate, tritolyl phosphate, bis(2-ethylhexyl) phenyl phosphate, tri (nonylphenyl) phosphate, bis(dodecyl) p-tolyl phosphate, tricresyl phosphate, triphenyl phosphate, dibutyl phenyl phosphate, 2-chloroethyl diphenyl phosphate, p-tolyl bis(2,5,5'-trimethylhexyl) phosphate, 2-ethylhexyl diphenyl phosphate, or a combination comprising at least one of the foregoing aromatic phosphates.

[c9] 9. The composition of Claim 1, wherein the flame retardant is a di- or polyfunctional compound having the formula (VI), (VII), or (VIII):

$$R^{1}O \xrightarrow{P} O \xrightarrow{Q} O \xrightarrow{Q} O \xrightarrow{R^{2}} O R^{1}$$

$$R^{5}O \xrightarrow{R^{4}} O \xrightarrow{(X^{2})_{m}} R^{3} \xrightarrow{Q} O \xrightarrow{R^{4}} O R^{5}$$

$$R^{6}O \xrightarrow{P} O \xrightarrow{R^{6}} R^{7}$$

$$R^{6}O \xrightarrow{P} O \xrightarrow{R^{6}} R^{7}$$

$$R^{6}O \xrightarrow{R^{7}} O \xrightarrow{R^{6}} R^{7}$$

$$(VIII)$$

wherein R 1 , R 3 and R 5 are, independently, hydrocarbon; R 2 , R 4 , R 6 and R 7 are, independently, hydrocarbon or hydrocarbonoxy; X 1 , X 2 and X 3 are halogen; m and r are 0 or integers from 1 to 4, and n and p are from 1 to 30.

[c10] 10.The composition of Claim 1, wherein the flame retardant is a phosphoramide of the formula (IX):

wherein each A is a 2,6-dimethylphenyl moiety or a 2,4,6-trimethylphenyl moiety.

- [c11] 11.The composition of Claim 1, wherein the flame retardant is selected from resorcinol bis(diphenyl phosphate), bisphenol A bis(diphenyl phosphate) N,N'-bis[di-(2,6-xylyl)phosphoryl]-piperazine, or a combination comprising at least one of the foregoing flame retardants.
- [c12] 12.The composition of Claim 1, wherein the flame retardant is bisphenol A bis (diphenyl phosphate).
- [c13] 13.The composition of Claim 1, wherein the flame retardant comprises about 10 to about 30 wt% of the total composition.
- [c14] 14. The composition of claim 1, wherein the composition has flammability rating of V-0 and a notched Izod greater than 2 ft-Ibs/inch and a surface resistivity less than 10 14 ohm/sq.
- [c15] 15. The composition of claim 1, wherein the composition has a flammability rating of V-1, a notched Izod greater than 2 ft-lbs/inch and a surface resistivity of less than 10 14 ohms/sq.
- [c16] 16. The composition of Claim 1, wherein the composition has a flammability rating of V-2, a notched Izod greater than 2 ft-lbs/inch and a surface resistivity of less than 10 14 ohms/sq.
- [c17] 17.An article comprising the composition of Claim 1.
- [c18] 18.An antistatic flame retardant composition comprising, based on the total weight of the composition,:
 about 10 to about 90 wt% of a polycarbonate resin;
 about 1 to about 20 wt% of an impact modifier comprising a polysiloxane;
 about 0.01 to about 25 wt% of an antistatic agent; and
 greater than or equal to about 9 wt% of a flame retardant comprising bisphenol A bis(diphenyl phosphate).
- [c19] 19.A method of manufacturing an antistatic composition, comprising:
 extruding a polycarbonate resin, an impact modifier comprising a polysiloxane,
 an antistatic agent, and a flame retardant in an amount greater than or equal to
 about 9 wt% of the total composition.